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## **Redescription of the original specimens of *Proapocyrthus* SCHULTZE 1918 (Coleoptera: Curculionidae)**

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**A b s t r a c t :** *Proapocyrthus* SCHULTZE 1918 comprises two rare endemic weevil species from the Philippines. This study presents redescriptions and illustrations of the original specimens of *P. insularis* SCHULTZE 1918 and *P. luzonicus* SCHULTZE 1934 deposited in the Senckenberg Natural History Collections Dresden. Notes on genus characteristics are added.

**K e y w o r d s :** Curculionidae, Pachyrhynchini, *Proapocyrthus*, type material, Luzon, Panay, Philippines.

### **Introduction**

In the course of reviewing the genus *Apocyrthus* ERICHSON 1834, the author studied types of the only two species of *Proapocyrthus* SCHULTZE 1918 for comparison. *Proapocyrthus insularis*, the type species, was described by SCHULTZE (1918) upon a female, and later SCHULTZE (1934) published the description of another species, *Proapocyrthus luzonicus* based on a male. Only a total of four old specimens of *Proapocyrthus* are known to date, and the rareness of these taxa is indicated by the fact that no further specimens have become available since then.

### **Material and methods**

The examined specimens from the Collection of Willy Carl Max Schultze are deposited in the Senckenberg Natural History Collections Dresden, Germany.

A Leica Wild M10 binocular microscope with a camera lucida was used to prepare descriptions and the line drawing (Fig. 8). The digital photographs of specimens (Figs 1-4, 9, 10) were taken with a Leica DFC490 camera attached to a Leica MZ16 binocular microscope with the help of Image Manager IM50 and processed with Auto-Montage Pro and Adobe Photoshop 7.0 programmes. Labels (Figs 5-7, 11) were photographed with a Sony Cybershot DSC-T5 digital camera.

Measurements refer to the maximum length and width of structures. Total length is from apex of head (incl. mouthparts) to apex of elytra. Total length, head length including mouthparts, pronotal length, and elytral length are measured in lateral aspect of specimen. Total length and head length are approximate, because they depend on the mode of

preparation of specimens. Interoculus is the minimum distance between eyes. Rostrum width and length refer to the dorsum between scrobes; maximum width is near antennal insertion, length is measured medially from the transverse sulcus separating rostrum from head to an imaginary line connecting the most anterior points of epistoma (as the anterior margin is concave).

### ***Proapocyrtus* SCHULTZE 1918**

**Type species:** *Proapocyrtus insularis* SCHULTZE 1918 (by monotypy).

**Diagnosis:** Large, total length 13.4-15.4 mm. Head and pronotum small, when compared with elytra. Dorsum of rostrum in lateral aspect hardly convex, in dorsal aspect slightly diverging from base to level of insertion of scapes, posteriorly with median furrow prolonging a fine median sulcus on frons; base of rostrum dorsally sharply delimited by deep, straight, transverse groove. Eyes slightly bulging. Antennal scape hardly surpassing head posteriorly; funicular segments 2 and 3 subequal in length. Prothorax subcylindrical; anterior margin ventrally not concave, margin almost straight in lateral aspect. Pronotum with large, round, flattened tubercles (largest medially) and with weak median impression. Scutellum absent. Elytra strongly inflated, but somewhat flattened dorsally and abruptly bent ventrad at sides which bear more or less distinct impressions; posterior part of elytra strongly narrowed to a slender apical process. Foretibia of male hardly modified. Hind femur not reaching apex of abdomen in both sexes.

**Notes:** The two species of *Proapocyrtus* – one known in female, the other one in male – have a very different appearance and it is uncertain whether they form a monophyletic clade relative to their closest relatives, *Apocyrtus* ERICHSON 1834 and *Pseudapocyrtus* HELLER 1912. According to SCHULTZE (1918) the main difference between *Apocyrtus* and *Proapocyrtus* is the shape of elytra, which are strongly inflated (also dorsad) in *Apocyrtus* (and *Pseudapocyrtus*), but dorsally flattened and laterally abruptly declined in *Proapocyrtus*. In the female (*P. insularis*) the elytra have strong lateral impressions; these structures being weakly developed in the male (*P. luzonicus*), they are not present in any *Apocyrtus*. The apex of the elytra is strongly protruded in *Proapocyrtus*, but at most weakly so in *Apocyrtus* and in the females of *Pseudapocyrtus*. *Apocyrtus* has a characteristic ventral emargination of the anterior prothoracic margin; this feature is lacking in *Proapocyrtus*. The structures of sternites 3-5 of the *Proapocyrtus insularis* female (Fig. 8) differs strongly from the situation in *Apocyrtus* and *Pseudapocyrtus*, most of all by the pronounced medial tip of sternite 4.

**Distribution and included species:** The genus is endemic to the Philippines and includes two species, *P. insularis* from Panay and *P. luzonicus* from Luzon.

### ***Proapocyrtus insularis* SCHULTZE 1918 (Figs 1-8)**

*Proapocyrtus insularis* SCHULTZE 1918: 371-372 (description of female), pl. 1: fig. 1 (habitus of female).

**Material examined:** Holotype female ("type" designated by SCHULTZE 1918; Museum Dresden) from the mountains near Jamindan in Capiz Province on Panay Island; for labels see Fig. 5. Additional material: 2 females from Culasi in Antique Province on Panay Island (Museum Dresden), for labels see Figs 6-7. Note that the specimens are labelled "Cotypes" although SCHULTZE (1918) did not accept them as types and did not describe them, e.g., the obvious variation in scale colour is not mentioned.



**Description:** Colour black, with small round dots of scales, distributed as in Figs 1-4. Colour of dots variable, pale greenish in holotype (Figs 1, 4), almost transparent and appearing dark in another female (Fig. 2), and pale blue in a third female (Fig. 3).

**Size (in mm):** Holotype female: Total length 15.4; head length 3.5; pronotum length 3.5, width 3.6; elytra length 9.7, width 6.4; scape length 2.4; hind femur length 6.0; head width at eyes 2.06; interoculus 1.09; rostrum length 1.90, width 1.43. Further females (dark female is smallest): Total length (incl. rostrum) 14.0-14.4; head length 3.3-3.4, width 1.9-2.0; pronotum length 3.1-3.4, width 3.2-3.5; elytra length 9.0-9.8, width 6.3-6.5; scape length 2.2-2.3; hind femur length 5.3-6.0.

**Structures:** Dorsum of rostrum with very fine, scarce puncturation and with distinct, narrow median furrow in posterior half (slightly surpassing mid-length). Head between eyes with punctures of similar size, but very sparsely set. Dorsum of head behind eyes with very fine shagreen and a few minute punctures. Imaginary longitudinal line on pronotal disk crossing approximately 15-16 tubercles. Elytra of very characteristic shape, dorsally slightly flattened and strongly narrowed at apical fifth; dorsum rather abruptly turning to sides which bear elongate impressions; medial part with almost regular rows of rather small punctures, with smooth interspaces, even intervals slightly raised to low ridges; lateral parts with irregular puncturation; apical process with some very short setae, in apical view sutural angles strongly incised, forming a roundish emargination. In ventral view (Fig. 8: female from Culasi), sternites 3 strongly depressed in anterior half, bulging in posterior half; sternite 4 slightly swollen at hind margin and there with small, sharp medial tip, lateral margins sharply raised; sternite 5 long, with strongly convex hind margin bearing some long setae, disk slightly concave.

### ***Proapocyrus luzonicus* SCHULTZE 1934 (Figs 9-11)**

*Proapocyrus luzonicus* SCHULTZE 1934: 320 (description of male), pl. 1: fig. 13 (habitus of male).

**Material examined:** Holotype male (Museum Dresden) from Mount Irid, Rizal Province in Central Luzon; for labels see Fig. 11.

**Description:** Colour black, elytra except lateral margins and most of tibiae and femora chestnut brown, dorsum of body (Fig. 9) with a few scattered bluish green scales, sides of body with numerous scales distributed as in Fig. 10.

**Size (in mm):** Holotype male: Total length 13.4; head length 3.4; pronotum length 2.9, width 3.0; elytra length 8.5, width 5.6; scape length 2.3; hind femur length 5.0; head width at eyes 1.91; interoculus 0.96; rostrum length 1.74, width 1.19.

**Structures:** Dorsum of rostrum with moderately dense, fine puncturation and with distinct, narrow median furrow in posterior third, weakly extended until mid-length. Head between eyes with punctures of similar size, but more sparsely set. Dorsum of head behind eyes with very fine shagreen and with a few minute punctures. Imaginary longitudinal line on pronotal disk crossing approximately 15 tubercles. Elytra of very characteristic shape, dorsally slightly flattened and strongly narrowed at apical fourth; dorsum rather abruptly turning to sides which bear a distinct elongate impression near humeri; medial part with regular rows of rather small punctures and with smooth interspaces; lateral parts with irregular punctures and interspaces partly with low, transverse wrinkles; intervals apically not ridged; apical process laterally with rather long ventrad directed setae, in apical view each elytron with a minute tooth. In ventral view with long, unseg-

mented sternal plate (sternite 1?) reaching base of elytral process, which is hollowed. Possibly terminal segments lacking, or turned dorsad. The unique representative of this species was not dissected.

Comparative notes: *Proapocyrtus luzonicus* differs strongly from *P. insularis* by colour, scale pattern, shape of elytra, and short median furrow on rostrum.

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### Zusammenfassung

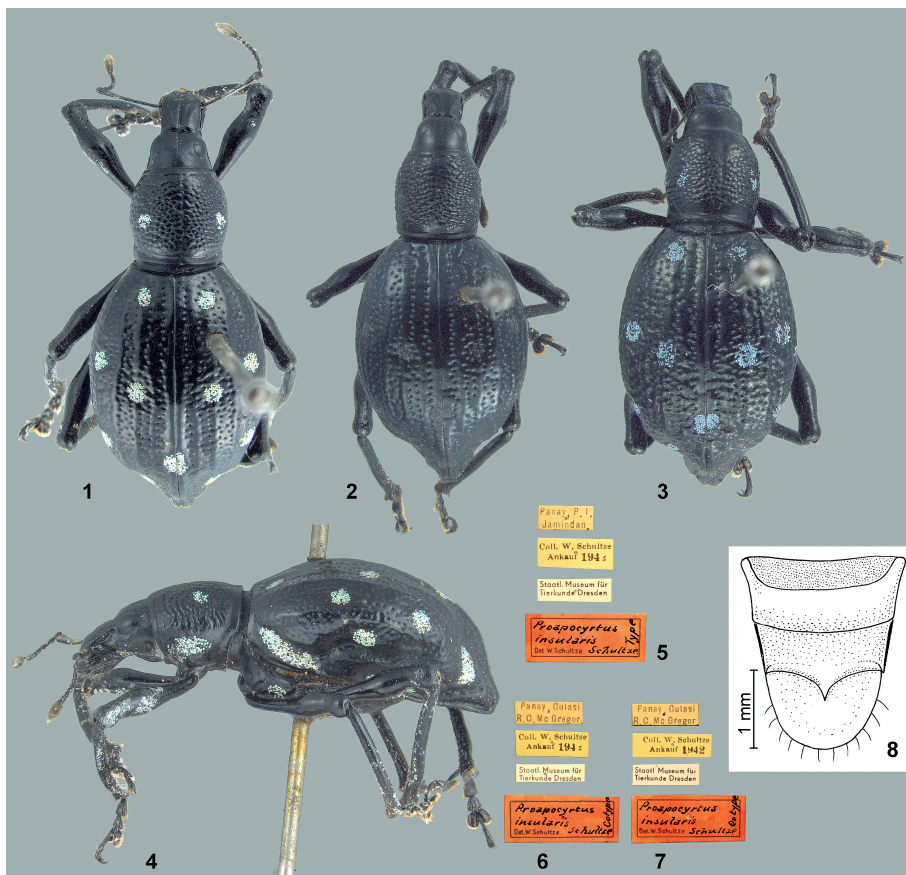
*Proapocyrtus* SCHULTZE 1918 umfasst zwei seltene Rüsselkäferarten von den Philippinen. Vorliegende Arbeit redeskribiert und illustriert Originalmaterial von *P. insularis* SCHULTZE 1918 und *P. luzonicus* SCHULTZE 1934, welches in Dresden in den Naturhistorischen Sammlungen Senckenberg aufbewahrt ist. Weitere Angaben zur Gattung ergänzen die Arbeit.

### References

- SCHULTZE W. (1918): Sixth contribution to the Coleoptera fauna of the Philippines. — The Philippine Journal of Science D **13** (6): 371-381, 1 plt.
- SCHULTZE W. (1934): Thirteenth contribution to the Coleoptera fauna of the Philippines. — The Philippine Journal of Science D **53** (3): 311-337, 2 plts.

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**Figs 1-8:** *Proapocyrthus insularis*. (1, 4, 5) Holotype female, (2, 3, 6, 7) females from Culasi: Habitus in dorsal and lateral aspect; and labels. (8) Sternites 3-5, ventral aspect, dissected from a Culasi female.



**Figs 9-11:** *Proapocyrtus luzonicus*, holotype male: Habitus in dorsal and lateral aspect; and labels.